ENGINE VALVE ACTUATOR ASSEMBLY

ABSTRACT OF THE DISCLOSURE

A valve actuator assembly for an engine includes a movable engine valve. The valve actuator assembly also includes a movable finger for contact with the engine valve and a rotatable cam for contact with the finger. The valve actuator assembly further includes a finger-support element assembly for contact with the finger having a first piston and a second piston. The first piston and second piston are axially aligned and independently movable in the same direction to provide lift of the engine valve in an activated mode and lost motion of the engine valve in a deactivated mode. In the activated mode, one end of the second piston is the stationary pivot for the finger, and the other end contacts the first piston. The first piston rests on a fluid column. In the de-activated mode, fluid is exhausted hydraulically, yielding lost motion, and the two pistons are displaced away from each other by their biasing springs. The first piston remains stationary, and the second piston undergoes a reciprocating motion.